

AMENDMENT UNDER 37 C.F.R. § 1.111
U. S. Application No. 09/607,921

REMARKS

Claims 1-26 are all the claims pending in the application, including new claims 19-26 added by the present Amendment.

In response to the Amendment filed August 20, 2003, the Examiner removed the previous rejections. The status of the claims is the following.

Claims 1-9, 11, 14, and 16-18 are rejected under 35 U.S.C. § 102(b) as being anticipated by Honda (US 5,233,989). Claims 10 and 13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Honda in view of Luo et al. (US 5,901,240). Claims 12 and 15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Honda.

Honda et al. relates to an X-ray imaging method and an X-ray imaging system for judging whether an X-ray contrast image of a biological body under medical examination can be acquired during X-ray imaging operation by checking temporal variations contained in averaged values of image concentration with respect to subdivided X-ray image regions.

Luo et al. relates to a method for detecting the collimation field in a digital radiography to facilitate optimal tone scale enhancement, to minimize the viewing flare caused by the unexpected area, and to benefit image segmentation and body part identification.

Applicant submits that the prior art fails to teach or suggest all of the limitations of claim 1. Specifically, Honda et al. do not disclose performing image outputting with the image output device of the one original image signal having been transferred, prior to the operation-processed image signal being obtained from the predetermined operation processing. Claim 1 as originally filed described an image output in accordance with an original signal. By contrast, a processed signal is referred to as an operation-processed signal. Honda et al. does not include the order of

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original image output as described by claim 1. Honda et al. disclose that original image data are supplied to a display unit 16 when an operator transmits an operation signal "S_o" to the switching element 15 and, at the same time, a mixture signal "S_m" is supplied to the original image frame memory 6. See col. 4, lines 55-61. The mixture signal "S_m" is a contrast medium mixed with one original image "X_i," and is supplied to the original image frame memory 6 and the display unit 16. See col. 4, lines 50-54. Thus, Honda et al. disclose outputting the processed mixture signal "S_m," until the operator transmits the operation signal "S_o" to the switching element 15 and the mixture signal "S_m" is supplied to the original image frame memory 6. Then, the original image data are output to the display unit 16. Hence, Honda et al. fail to teach or suggest performing image outputting with the image output device of the one original image signal having been transferred, prior to the operation-processed image signal being obtained from the predetermined operation processing.

Therefore, the Honda et al. reference does not anticipate claim 1 of the present invention.

Also, claims 2, 3, and 17 are not anticipated by Honda et al., at least because of their dependence from claim 1.

Claim 4 is patentable for reasons analogous to that for claim 1. Accordingly, Applicant submits that claim 4 and its dependent claims 5, 6, 9, 10, 11, 12 and 16 are not anticipated by Honda et al. for reasons analogous to those presented above for claim 1.

Claim 7 is amended herein to recite that the plurality of original image signals are obtained at the same time. The apparatus of claim 7 receives plural original images and performs a predetermined operation on plural original images to obtain an operation-processed signal. By contrast, in Honda et al., the signal S_m, for example, is derived from one original

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signal X_i and a another original signal X_{i-1} taken at another time. Thus, the plurality of original image signals are not obtained at the same time. Therefore, claim 7 is not anticipated by Honda. Claims 13-14 are allowable based on their dependency.

Claim 8 is patentable for reasons analogous to those for claim 1.

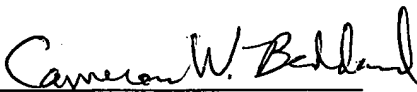
Also, claims 15 and 18 are allowable over the prior art, at least because of their dependence from claim 8.

New claims 19-26 are added to describe certain features of the present invention more particularly and are believed to be allowable at least because of their dependence from claims 1, 4, and 8, respectively.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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